Extension Service
West Virginia University

Disaster and Emergency Management Resources

Winter Storms and Agricultural Producers

To protect livestock on some farms from winter storms, it may be necessary to provide shelters, sheds, or windbreaks.

- Shallow open-front sheds provide excellent shelters for livestock. Such shelters should have slot openings along the eaves on the back side of the shelter. These openings will provide ventilation and prevent snow from swirling into the front of the shed.
- Windbreaks, properly oriented and laid out, are better protection for range cattle than most shed-type shelters, which may overcrowd and overheat cattle.
- The effectiveness of a windbreak depends on its height and density. Windbreaks may be natural (trees) or man-made (fences).
- Snow fences can be good substitutes for tree windbreaks, which take time to grow and are not practical under all conditions. Porous fences of 80 percent density offer the best wind protection. Snow, however, will drift through a porous fence. A solid fence keeps most of the snow outside a yard and provides the best snow barrier, but it may direct snow to other parts of the farmstead.
- Carefully plan a windbreak before you plant. In designing the windbreak, you should consider size and location, tree species, tree spacing, and soil preparation.
- To give the best protection from wind and snow, a windbreak should be located to the northwest of the farmstead in an L-, U- or E-shape, with the ends extending about 50 feet beyond each corner of the area to be protected. The windbreak should be at least 50 feet and preferably 100 feet from farm buildings and feedlots on level land. (If your land slopes steeply to the north or west, plant trees closer to the farmstead, but no closer than 60 feet from the main buildings or drives).
- Avoid planting windbreaks across old feedlots, near manure pits, or across barnyard drainage ways. Many trees, especially evergreens, are susceptible to "nitrogen burning." If any section of the windbreak is likely to be saturated by barnyard seepage, plan to construct a ditch or use drainage tile to carry the seepage away from trees.
- Do not plant windbreaks where they could cause visibility hazards at intersections.
- If it is necessary to cross fields, driveways, or large ditches with a windbreak planting, try to make the crossing at oblique angles. This will prevent direct wind tunnels through the planting.

- Windbreaks should contain several tree species to offer protection against disease, insects, and weather damage and to take advantage of differences in growth rates. Both deciduous and evergreen species should be included, but all trees must have adequate space. Contact your county Extension agent for information about appropriate windbreak species for your area.

Specific Actions to take to Protect Livestock During a Winter Storm

- Move stock, especially the young, into sheltered areas.
- Never close indoor shelters tightly because stock can suffocate from lack of oxygen.
- During severe or prolonged cold weather, animals need extra feed to provide body heat and to maintain production weight gains.
- If the storm lasts for more than 48 hours, emergency feeding methods may be required. Pelleted cake or cake concentrates make good emergency feed.
- Following a blizzard, water will be a crucial need for livestock. Cattle will not be able to satisfy all of their water requirements by eating snow. You may need to haul water to cattle. If water is limited, keep cattle off salt. Cattle that have been away from feed and water for several days may overeat salt, causing salt poisoning.
- Feedlot cattle that have gone through a severe storm or stress period should be put back on feed carefully. Change the ration gradually from a low to a high proportion of concentrate. Watch your herd carefully for several weeks following prolonged exposure. Isolate cattle showing signs of scouring or labored breathing. Keep these animals in a dry, draft-free place and contact a veterinarian.
- If sheep, especially pregnant ewes, are withheld from feed, heavy losses may occur. Sheep can eat 1 to 3 pounds of whole grain per day. A small amount of roughage will prevent digestive trouble. Drying feed before giving it to sheep can reduce the possibility of digestive problems.
- Horses fed a maintenance ration adequate for summer conditions may need additional energy in their winter feed. They can tolerate reduced rations for a few weeks unless they are mares nursing foals.
- Swine present few problems during periods of feed shortage. If you are substituting other feed, such as dairy feed, for regular swine feed, be sure swine have adequate fresh water available at all times.

Adapted from resource material developed by the University of Wisconsin Extension Service entitled "The Disaster Handbook for Extension Agents"